Tsitologiya 2002 vol.44 N7, pages 621-622

The ultrastructure of the main lateral nerve cords and accompanying elements of Triaenophorus nodulosus (Cestoda: Pseudophyllidea)

Biserova N., Sal'nikova M.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The ultrastructure of lateral nerve cords (LNC) of Triaenophorus nodulosus has been studied. 4 of the 6 types of neurones earlier reported for cerebral ganglia are present in LNC: multipolars, bipolars, unipolars and «light»; neurosecretory cells of the 7th type lie in transverse commissures. The growth and formation of LNC occur at the expense of undifferentiated cells found on the cord periphery among mature neurones. LNC are surrounded with specialized envelopes made of cell processes of excretory vessels and a fibrillar matrix formed at early stages of cestode development. In large axons, cisternae of the cross reticulum are detected, which can serve as ultrastructural marker of the synapse. Two types of muscle innervation are determined. The direct innervation of muscular fibres is realized by peripheral neurosecretory neurones, which form contacts of the paracrine type. The central or sarco-neural innervation of muscular libers occurs in LNC via the entering muscular processes.

Keywords

Cestoda, Glia-like cells, Nervous, Synapses, System, Ultrastructure